

AMENDMENTS TO THE CLAIMS

Please amend the claims as indicated below. The language being added is underlined ("___") and the language being deleted contains either a strikethrough ("——") or is enclosed by double brackets (" ").

LISTING OF CLAIMS

1. (Currently Amended) A method for dynamic bin allocation, the method comprising:

obtaining link performance data based on a plurality of test transmissions between two network elements, wherein the plurality of test transmissions comprises an upstream transmission, a downstream transmission, and a full-duplex transmission, ~~wherein the plurality of test transmissions performed in every channel of a discrete multi-tone (DMT) communications system and each performed at a maximum transmission power; utilize each of a plurality of transmission modes in each of a plurality of frequency ranges;~~

determining a desired transmission scheme for the discrete multi-tone communications system, wherein each channel of the discrete multi-tone communications system of the plurality of frequency ranges is designated for one of the ~~a transmission mode~~ modes based at least in part on the link performance data, ~~wherein the link performance data comprises at least one of a data rate, an error rate, a signal-to-interference ratio, and a signal-to-noise ratio and the transmission mode is selected from an upstream mode, a downstream mode, and a full-duplex mode; and~~

assigning the desired transmission scheme to a connection between the two network elements in the discrete multi-tone communications system.

2. (Cancelled)

3. (Cancelled)

4. (Currently Amended) The method according to claim 1, wherein the link performance data are obtained for each of a plurality of predetermined transmission schemes; and

the desired transmission scheme is selected from the plurality of predetermined transmission schemes based ~~at least in part~~ on the link performance data.

5. (Original) The method according to claim 4, wherein the test transmissions are based on the plurality of predetermined transmission schemes.

6. (Original) The method according to claim 1 further comprising communicating the desired transmission scheme to at least one of the two network elements and continue communications between the two network elements based on the desired transmission scheme.

7. (Cancelled)

8. (Original) The method according to claim 1, wherein the plurality of frequency ranges are defined based on an orthogonal frequency division multiplexing (OFDM) technology.

9. (Cancelled)

10. (Cancelled)

11. (Cancelled)

12. (Previously Presented) The method according to claim 1, wherein the connection further comprises a digital subscriber line (DSL).

13. (Currently Amended) A system for dynamic bin allocation, the system comprising a first network element and a second network element, wherein each of the first network element and the second network element comprises at least a processor module and a transceiver module that are coordinated to

obtain link performance data based on a plurality of test transmissions between the first network element and the second network element, wherein the plurality of test transmissions comprises an upstream transmission, a downstream transmission, and a full-duplex transmission, wherein the plurality of test transmissions performed in every channel of a discrete multi-tone (DMT) communications system and

~~each performed at a maximum transmission power; utilize each of a plurality of transmission modes in each of a plurality of frequency ranges;~~

determine a desired transmission scheme for the discrete multi-tone communications system, wherein each channel of the discrete multi-tone communications system ~~of the plurality of frequency ranges~~ is designated for one of the a transmission mode ~~modes based at least in part~~ on the link performance data, wherein the link performance data comprises at least one of a data rate, an error rate, a signal-to-interference ratio, and a signal-to-noise ratio and the transmission mode is selected from an upstream mode, a downstream mode, and a full-duplex mode; and

assign the desired transmission scheme to a connection between the two network elements in the discrete multi-tone communications system.

14. (Cancelled)

15. (Currently Amended) The system according to claim 13, wherein the link performance data are obtained for each of a plurality of predetermined transmission schemes; and

the desired transmission scheme is selected from the plurality of predetermined transmission schemes based ~~at least in part~~ on the link performance data.

16. (Currently Amended) A system for dynamic bin allocation, the system comprising:

means for obtaining link performance data based on a plurality of test transmissions between two network elements, wherein the plurality of test transmissions comprises an upstream transmission, a downstream transmission, and a full-duplex transmission, wherein the plurality of test transmissions performed in every channel of a discrete multi-tone (DMT) communications system and each performed at a maximum transmission power; ~~utilize each of a plurality of transmission modes in each of a plurality of frequency ranges;~~

means for determining a desired transmission scheme for the discrete multi-tone communications system, wherein each channel of the discrete multi-tone communications system of the plurality of frequency ranges is designated for one of the a transmission mode ~~modes based at least in part~~ on the link performance data, wherein the link performance data comprises at least one of a data rate, an error rate, a signal-to-interference ratio, and a signal-to-noise ratio and the transmission mode is selected from an upstream mode, a downstream mode, and a full-duplex mode; and

means for assigning the desired transmission scheme to a connection between the two network elements in the discrete multi-tone communications system.

17. (Cancelled)

18. (Currently Amended) The system according to claim 16, wherein the link performance data are obtained for each of a plurality of predetermined transmission schemes; and

the desired transmission scheme is selected from the plurality of predetermined transmission schemes based at least ~~in part~~ on the link performance data.

19. (Currently Amended) A computer readable medium having code for causing a processor to perform dynamic bin allocation, the computer readable medium comprising:

code adapted to obtain link performance data based on a plurality of test transmissions between the first network element and the second network element, wherein the plurality of test transmissions comprises an upstream transmission, a downstream transmission, and a full-duplex transmission, wherein the plurality of test transmissions performed in every channel of a discrete multi-tone (DMT) communications system and each performed at a maximum transmission power; utilize each of a plurality of transmission modes in each of a plurality of frequency ranges;

code adapted to determine a desired transmission scheme for the discrete multi-tone communications system, wherein each channel of the discrete multi-tone communications system of the plurality of frequency ranges is designated for one of the a transmission mode ~~modes~~ based at least ~~in part~~ on the link performance data, wherein the link performance data comprises at least one of a data rate, an error rate, a

signal-to-interference ratio, and a signal-to-noise ratio and the transmission mode is selected from an upstream mode, a downstream mode, and a full-duplex mode; and
code adapted to assign the desired transmission scheme to a connection
between the two network elements in the discrete multi-tone communications system.

20. (Cancelled)

21. (Currently Amended) The computer readable medium according to claim 19,
wherein

the link performance data are obtained for each of a plurality of predetermined
transmission schemes; and

the desired transmission scheme is selected from the plurality of
predetermined transmission schemes based ~~at least in part~~ on the link performance
data.